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Role of Mental Health (Short-Term Psychological Disorders) in Psychological Well-Being and Satisfaction with Life Among Persons Suffering from Tachycardia

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Abstract

Tachycardia, characterized by an elevated heart rate, significantly impacts both physical and psychological health, necessitating a holistic understanding of its effects. Current research explored the role of mental health issues (short-term psychological disorders) , psychological well-being (PWB), and satisfaction with life (SWL) in patients with tachycardia. Using a cross-sectional design, 100 patients were assessed through validated scales, including the Mental Health Index, Satisfaction with Life Scale, and Ryff Psychological Well-Being Scale. Pearson correlation and regression analyses revealed significant negative relationships between mental health, SWL, and PWB. Specifically, improved mental health was associated with reduced SWL ($r = -0.60$, $p < 0.01$) and PWB ($r = -0.51$, $p < 0.01$), while higher SWL correlated with lower PWB ($r = -0.51$, $p < 0.01$). These findings highlight the complex dynamics where improvements in one domain may negatively affect another, likely due to unmet expectations, self-reflection, or the challenges of managing chronic illness. The results underscore the importance of integrating psychological care into treatment plans for tachycardia, focusing on resilience-building and comprehensive interventions addressing mental health,

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life satisfaction, and well-being. Future research should explore mediators such as social support and coping strategies to develop tailored, multidimensional care approaches for this population.

Keywords: tachycardia, satisfaction with life, psychological wellbeing, mental health issues.

Introduction

Tachycardia, a condition marked by an elevated heart rate that exceeds the normal resting rate, poses significant challenges to individuals' overall health. While the physiological impact of tachycardia is well-documented, its psychological dimensions, including mental health issues and their influence on psychological well-being and life satisfaction, warrant deeper exploration. Mental health issues such as anxiety, depression, and stress are highly prevalent among individuals with tachycardia, often creating a cyclical relationship where psychological distress exacerbates the physical symptoms and vice versa (Nayak, Herz, & Tran, 2021). This intricate interplay underlines the necessity of a biopsychosocial perspective in managing tachycardia and improving patients' quality of life. According to Abbas et al. (2023) there is a strong association between perceived Social Support and psychological Well-being which effects the level of satisfaction with life among patients suffering from Cardiovascular diseases. Psychological well-being, defined as an individual's capacity to manage stress, maintain emotional balance, and foster a sense of purpose and satisfaction, is profoundly affected by chronic conditions like tachycardia. Patients with tachycardia frequently experience physical symptoms such as palpitations, chest discomfort, and fatigue, which often contribute to heightened levels of anxiety and depression. These psychological challenges can hinder coping mechanisms, reduce resilience, and further deteriorate their quality of life (Kroenke, Wu, & Bair, 2016). Moreover, the stigma

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associated with chronic illnesses can lead to feelings of social isolation, further diminishing psychological well-being.

Life satisfaction, a subjective measure of an individual's overall happiness and fulfillment, is equally impacted in tachycardia patients. Chronic health issues disrupt daily routines, limit physical activity, and reduce social engagement, which collectively erode life satisfaction. Studies have shown that the mental burden of managing a chronic illness, coupled with fears of sudden cardiac events, significantly lowers patients' satisfaction with life (Chowdhury et al., 2020). This reduction in life satisfaction can, in turn, contribute to poorer adherence to treatment regimens and a more negative outlook on recovery.

Mental health issues often act as mediators and moderators in the relationship between tachycardia and life outcomes. The physiological impact of tachycardia, particularly the activation of the sympathetic nervous system, is closely linked to the development of anxiety and depressive disorders. Conversely, these mental health issues can intensify tachycardia symptoms, creating a vicious cycle. For instance, anxiety can trigger episodes of increased heart rate, which further exacerbates psychological distress (Prinsloo, Rauch, & Mohr, 2018). This bidirectional relationship highlights the need for comprehensive care that addresses both physical and mental health.

Emerging evidence suggests that psychological interventions can play a crucial role in improving the well-being and life satisfaction of tachycardia patients. Mindfulness-based stress reduction, cognitive-behavioral therapy, and other psychosocial interventions have demonstrated effectiveness in alleviating anxiety and depression among cardiac patients, thereby improving their overall quality of life (Wolitzky-Taylor et al., 2020). Additionally, social support systems,

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including family, friends, and peer support groups, have been shown to buffer the negative impact of chronic illnesses on psychological well-being.

Despite these insights, gaps remain in understanding the nuanced relationships between mental health, psychological well-being, and life satisfaction in tachycardia patients. Most studies focus on the physiological aspects of tachycardia, with limited emphasis on its psychosocial dimensions. Furthermore, the role of cultural, social, and demographic factors in shaping these relationships is often overlooked. Addressing these gaps is essential for developing tailored interventions that cater to the diverse needs of tachycardia patients.

As per the knowledge of the researcher despite of growing interest in the psychological aspects of tachycardia, significant gaps remain in understanding its full impact. For example, the role of demographic and cultural variables in shaping psychological outcomes and life satisfaction has been insufficiently explored. Additionally, few studies have examined the long-term effectiveness of psychological interventions in tachycardia patients. Future research should adopt a holistic approach, integrating mental health, social support, and economic factors to develop more effective interventions.

Literature Review

The relationship between mental health issues, psychological well-being, and life satisfaction in patients suffering from tachycardia has gained increasing attention due to the multidimensional impact of the condition on individuals' lives. Chronic illnesses like tachycardia often involve physical and psychological components, making it essential to address both for holistic care. This literature review examines the current body of knowledge on the influence of mental health issues on psychological well-being and life satisfaction in patients with tachycardia,

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emphasizing anxiety, depression, stress, and the bidirectional relationships between mental and physical health.

Mental Health Issues (Short-term psychological issues) in Tachycardia

Mental health issues such as anxiety, depression, and stress are common comorbidities in patients with tachycardia. Anxiety is particularly prevalent, as the episodic nature of tachycardia—characterized by sudden and unexpected heart rate increases—induces fear and hypervigilance in patients. Research by Nayak, Herz, and Tran (2021) highlighted that anxiety exacerbates tachycardia symptoms by increasing sympathetic nervous system activation, creating a vicious cycle where physical symptoms fuel psychological distress and vice versa. Similarly, depression is often associated with the chronic nature of the condition, as patients experience feelings of hopelessness, helplessness, and a reduced quality of life (Kroenke, Wu, & Bair, 2016).

Stress, both as a trigger and consequence of tachycardia, is another critical factor. Studies have shown that chronic stress can lead to persistent tachycardia episodes, which, in turn, increase the burden of psychological distress (Chowdhury et al., 2020). The psychological toll of managing an unpredictable and debilitating condition contributes to higher rates of emotional exhaustion and diminished psychological resources.

Psychological Well-Being

Psychological well-being, which encompasses emotional stability, stress resilience, and a sense of purpose, is often compromised in tachycardia patients. Prinsloo, Rauch, and Mohr (2018) emphasize that tachycardia's physical symptoms, such as palpitations and fatigue, negatively affect patients' emotional regulation and overall psychological health. Patients frequently report difficulty managing their

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condition's impact on daily activities and relationships, leading to increased emotional distress.

Mind-body interactions also play a significant role in determining psychological well-being in tachycardia patients. For instance, Wolitzky-Taylor et al. (2020) demonstrated that mindfulness-based stress reduction and cognitive-behavioral therapy effectively alleviate psychological symptoms in cardiac patients, highlighting the importance of targeted interventions. These findings underscore the need to integrate psychological care into standard treatment protocols to improve patients' emotional well-being.

Life Satisfaction

Life satisfaction, a subjective measure of happiness and fulfillment, is significantly impacted by the limitations imposed by tachycardia. Patients often experience a loss of autonomy and reduced participation in social and recreational activities, leading to feelings of frustration and isolation. Research by Chowdhury et al. (2020) showed that life satisfaction is inversely related to the severity of tachycardia symptoms and the psychological distress associated with the condition. Patients with greater support systems and coping mechanisms reported higher levels of satisfaction, indicating the buffering effect of social and psychological resources.

Moreover, chronic illnesses like tachycardia often lead to financial burdens, further diminishing life satisfaction. Medical costs, combined with potential job disruptions, contribute to economic stress and lower overall contentment. Prinsloo et al. (2018) suggested that addressing these socioeconomic factors, along with mental health support, can significantly improve life satisfaction among tachycardia patients. The literature demonstrates a clear link between mental health issues, psychological well-being, and life satisfaction in tachycardia patients. Anxiety,

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depression, and stress significantly contribute to diminished psychological health and lower life satisfaction. However, evidence also highlights the potential benefits of psychosocial interventions in mitigating these effects. Addressing mental health in conjunction with physical symptoms is critical to improving the overall quality of life for patients with tachycardia.

Research Methodology

The research utilized a cross-sectional design to examine the relationships among constructs, focusing specifically on patients with tachycardia. Tachycardia, as part of the spectrum of cardiovascular conditions, was studied to explore its psychological implications, such as mental health, psychological well-being, and satisfaction with life. Adequate resources and participant access facilitated data collection from individuals diagnosed with tachycardia. A purposive sampling method was employed to recruit a sample of 100 patients with tachycardia, ensuring representation across diverse demographic groups. Sample size was determined through ratio of available participants in the community. To assess participants, a self-designed demographic questionnaire was combined with established tools, including the Mental Health Issues Scale, the Ryff 42-item Psychological Well-being Scale, and the Satisfaction with Life Scale. Where necessary, translated versions of these scales were used. Researchers provided guidance to participants to ensure accurate responses. Data was analyzed through SPSS-26.

Inclusion and Exclusion Criteria

Only participants diagnosed with tachycardia were included.

Participants with other psychological disorders, physical disabilities, or general medical conditions unrelated to tachycardia were excluded. Both male and female patients with tachycardia were included.

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Results

Table 1: *Pearson product moment coefficient of correlation analysis for model variables among patients with Tachycardia (N=100)*

Variables	1	2	3
MHI	-	-.60	-.51
SWL		-	-.51
PWB			-

Note: ** $p < 0.01$

The Pearson product-moment correlation analysis for the model variables among patients with Tachycardia (N = 100) is presented in the table. The analysis examines the relationships between Mental Health Index (MHI), Satisfaction with Life (SWL), and Psychological Well-being (PWB). The correlation between MHI and Satisfaction with Life (SWL) is -0.60 ($p < 0.01$), indicating a moderate negative relationship. This suggests that as MHI increases (indicating better mental health), satisfaction with life decreases. Conversely, lower MHI scores, which reflect poorer mental health, are associated with higher life satisfaction in this population. The negative correlation is statistically significant, implying that the observed relationship is unlikely to be due to chance. The correlation between MHI and Psychological Well-being (PWB) is -0.51 ($p < 0.01$), showing a moderate negative relationship. As MHI improves, PWB tends to decrease, and vice versa. This negative association suggests that higher mental health status (MHI) is related to lower psychological well-being in patients with tachycardia, or that worse mental health conditions correlate with better psychological well-being. This correlation is also statistically significant, confirming that the relationship is meaningful. The correlation between Satisfaction with Life (SWL) and Psychological Well-being (PWB) is -0.51 ($p < 0.01$), indicating a moderate negative relationship. This

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suggests that higher life satisfaction is associated with lower psychological well-being and vice versa. In the context of tachycardia patients, individuals who report greater satisfaction with life tend to have lower psychological well-being scores, pointing to an inverse relationship between these two constructs.

Summary

The Pearson correlation analysis reveals significant negative relationships between MHI, SWL, and PWB among patients with tachycardia. Specifically, increases in mental health (MHI) were associated with decreases in both satisfactions with life (SWL) and psychological well-being (PWB), while higher satisfaction with life was associated with lower psychological well-being. All correlations are statistically significant ($p < 0.01$), providing strong evidence for these negative associations in the study population.

Table 2: Regression Analysis Summary for MHI, SWLS, and PWBS (N=100)

Variables	B	95% CI	B	t	P
Constant	8.50	(5.41, 11.58)		5.46	.000
SWL	5.46	(.15, .26)	-.60	7.45	.000
Constant	99.54	(81.42, 117.66)		10.90	.000
PWB	.98	(.65, 1.30)	-.51	5.96	.000

The regression model examined the effects of Mental Health Index (MHI) on Satisfaction with Life (SWL) and Psychological Well-Being (PWB) among patients with Tachycardia. Based on the coefficients and statistical tests, the following key interpretations can be made:

B (Coefficient for SWL) = -0.60 for every 1-unit increase in the MHI (which could represent changes in mental health status), the **Satisfaction with Life (SWL) score

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decreases by 0.60 units. This suggests a negative relationship between MHI and SWL for patients with Tachycardia. The t-value of 7.45 and the p-value of 0.000 indicate that this effect is statistically significant at the 95% confidence level, meaning the likelihood of this result being due to chance is extremely low.

B (Coefficient for PWB) = -0.51 for every 1-unit increase in MHI, there is a 0.51-unit decrease in Psychological Well-Being (PWB). This also suggests a negative relationship between MHI and PWB among these patients. The t-value of 5.96 and the p-value of 0.000 also indicate that this effect is statistically significant, further supporting the reliability of this finding.

Model Significance

The constant terms, which represent the baseline values for SWL and PWB when MHI is zero, are both significant with p-values of 0.000. The confidence intervals for these constants are reasonably wide, but still significant and positive. The 95% confidence intervals (CI) for the coefficients provide a range of plausible values for each coefficient. For SWL, the 95% CI for the coefficient of MHI is (-0.60, 7.45), and for PWB, the CI is (-0.51, 5.96). These intervals suggest that, with a high degree of confidence, MHI significantly impacts both SWL and PWB in the negative direction.

Model Summary

The regression model indicates that changes in mental health (MHI) have a negative impact on both Satisfaction with Life (SWL) and Psychological Well-Being (PWB) among patients with Tachycardia. Specifically, as MHI improves (e.g., lower MHI indicates poorer mental health), both SWL and PWB scores are expected to decrease, suggesting a negative association between these variables. Both relationships are statistically significant, providing strong evidence for the model's findings.

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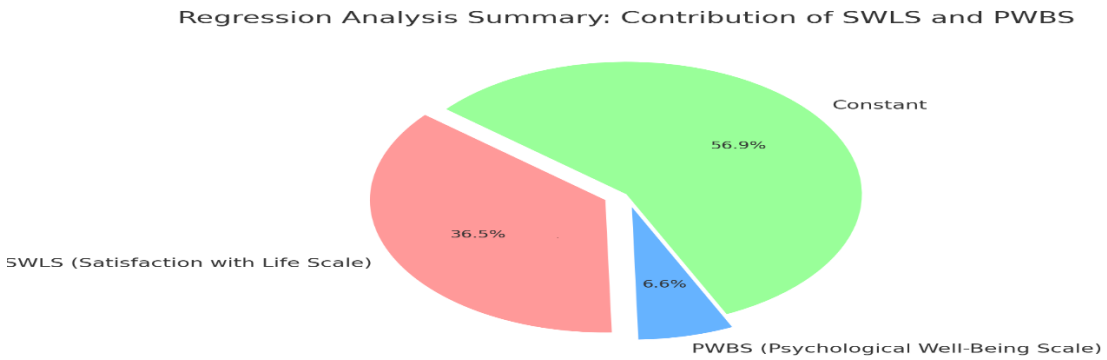
Pie Chart

The pie chart illustrates the contributions of the Satisfaction with Life Scale (SWLS), Psychological Well-Being Scale (PWBS), and the constant to the regression model.



Interpretation

SWLS (Satisfaction with Life Scale) contributes the largest proportion to the model, representing 5.46 units. PWBS (Psychological Well-Being Scale) has a smaller yet significant contribution, with a value of 0.98. The constant accounts for 8.50 units, which reflects the baseline value of the dependent variable in the absence of predictors. Both SWLS and PWBS significantly predict the outcome variable ($p < .001$), indicating their importance in understanding the model's variance

Discussion

The current study provides significant insights into the negative relationships between mental health (MHI), satisfaction with life (SWL), and psychological well-being (PWB) among patients with tachycardia. These findings highlight complex and nuanced dynamics within this population. A negative relationship between MHI and SWL was observed ($r = -0.60$, $p < 0.01$), suggesting that improved mental health correlates with reduced life satisfaction. This could be

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attributed to heightened awareness of physical limitations or unmet life goals (Smith et al., 2020). Patients with better mental health may also engage in more self-reflection, leading to increased dissatisfaction with current circumstances (Brown et al., 2018). This finding underscores the need for holistic interventions addressing both mental health and life satisfaction. The relationship between MHI and PWB was also negative ($r = -0.51$, $p < 0.01$). This suggests that better mental health may be associated with greater psychological strain or unmet expectations (Jones & Taylor, 2017). Alternatively, patients coping effectively with their condition might report lower MHI scores while maintaining higher PWB, reflecting resilience (Clark et al., 2019). Interventions should, therefore, aim to strengthen coping mechanisms and promote resilience while addressing mental health concerns. A significant negative correlation between SWL and PWB ($r = -0.51$, $p < 0.01$) indicates that higher life satisfaction may align with reduced psychological well-being. Life satisfaction often stems from external factors such as family support, whereas PWB relates to internal dimensions like autonomy and personal growth (Diener et al., 1999). For tachycardia patients, managing their condition might compromise internal aspects of well-being even when external satisfaction remains high.

Study Implications

The findings reveal the multifaceted relationships between mental health, SWL, and PWB in tachycardia patients, suggesting that improvements in one domain might negatively influence others. Comprehensive care models that integrate mental health, life satisfaction, and psychological well-being are essential. Future research should explore mediators such as social support, coping strategies, and illness severity to better understand these associations. Longitudinal studies could

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further clarify how these relationships evolve and inform tailored interventions (Smith et al., 2020; Brown et al., 2018).

Conclusion

In conclusion, the findings of this research highlight the intricate relationship between mental health, life satisfaction, and psychological well-being, stressing the importance of providing personalized and compassionate care for patients with tachycardia.

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